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THE MARKETING BILL FOR CIGARETTES

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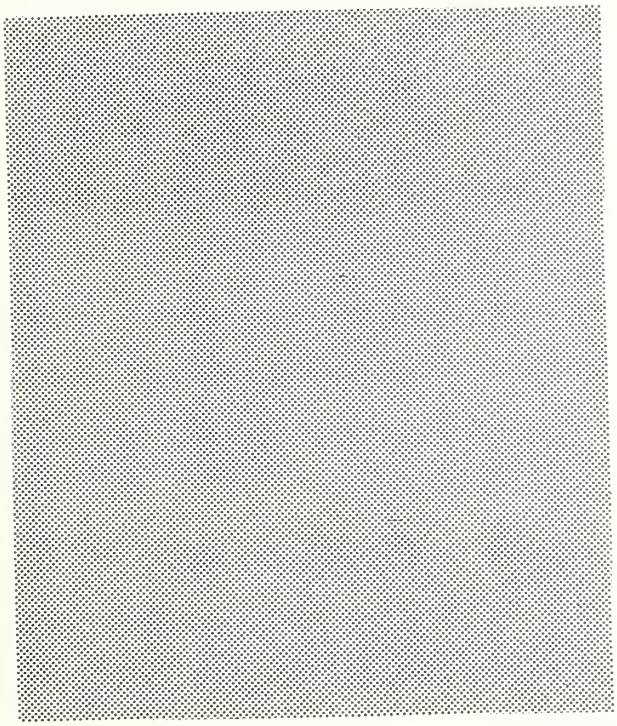

MARKETING ECONOMICS DIVISION
ECONOMIC RESEARCH SERVICE
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THE MARKETING BILL FOR CIGARETTES 1/

U.S. consumer expenditures for cigarettes declined slightly in 1964 after moving upward steadily for many years. The $7.1 billion spent in 1964 was 2 1/3 times 1947 expenditures of $3.0 billion (table 8). This increase reflected an upward trend in both consumption and prices. Cigarette consumption increased by about one-half during the period and average retail prices by almost three-fifths. Increases in population and consumer incomes contributed to the growth in consumption.

The shift in consumer preference from regular cigarettes to filter tips was a factor in the higher average price. In 1953, when the market for filters began to develop, about 3 percent of the cigarettes consumed in the United States had filters, but by 1964 more than three-fifths were of this type. Before 1963, manufacturers list prices for filters were higher than those for regular and king-size cigarettes. The wholesale price announced (less trade discounts) in 1953 for some brands of filter tips was $2.64 per 1,000 more than the price of regular cigarettes; however, the price for a leading brand was 88 cents more than those for regular cigarettes. This differential gradually declined to 20 cents in 1963. The differential between king-size nonfilter and king-size filter tips was eliminated in 1963.

The farm value of the tobacco used in domestically produced cigarettes consumed in this country was $642 million in 1964 compared with $429 million in 1947 (table 8). Returns to farmers did not increase by as large a percentage as did consumer expenditures because prices received by farmers for leaf tobacco did not rise as fast as retail prices of cigarettes. In addition, the average quantity of tobacco used per 1,000 cigarettes decreased. The farm value made up 9 percent of consumer expenditures in 1964 compared with 14 percent in 1947.

The cigarette marketing bill.--The bill for marketing cigarettes smoked in the United States totaled $3.2 billion in 1964 compared with $1.2 billion in 1947. It represented 45 percent of consumer expenditures in 1964 and 38 percent in 1947.

This marketing bill is the difference between the farm value and consumer expenditures for cigarettes less excise taxes. It is composed of the manufacturing bill and the wholesaling-retailing bill. 2/ The manufacturing bill increased by a faster rate than the wholesaling-retailing bill from 1947 to 1964. By 1964, it accounted for 54 percent of the marketing bill compared with 50 percent in 1947.

Excise taxes have accounted for about the same proportion of consumer expenditures for cigarettes--46 percent in 1964 and 48 percent in 1947. The proportion represented by Federal excise taxes has declined, but that represented by State and local excise taxes has doubled.

Manufacturing Bill

The manufacturing bill is an estimate of total charges for assembling, stemming, redrying, storing and aging tobacco, converting tobacco into cigarettes, and selling cigarettes to wholesalers and retailers.

1/ Prepared by Virginia M. Farnworth, agricultural economist, Marketing Economics Division, Economic Research Service, USDA.

2/ Estimates of consumer expenditures for cigarettes (table 8) include those for imported cigarettes, but these expenditures are negligible. The farm value series in these statistics (table 8) is a smaller percentage of consumer expenditures than the farmer's share of the retail price of cigarettes published quarterly in the Marketing and Transportation Situation, (p. 2). This farmer's share is for a cigarette formula containing only domestic tobacco, whereas the farm value series (table 8) is only for the domestic tobacco used in cigarettes; the value of imported tobacco is part of the marketing bill.

Table 8.--Cigarettes: Consumer expenditures, marketing bill and farm value, United States, 1947-64

Year	Consumer expenditures 1/	Farm value 2/	Marketing bill			Taxes		
			Manufacturing 3/	Wholesaling-retailing 4/	Total	Federal	State and local	Total
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1947	3,044	429	581	583	1,164	1,174	277	1,451
1948	3,319	437	664	650	1,314	1,220	348	1,568
1949	3,463	492	690	663	1,353	1,231	387	1,618
1950	3,626	482	757	703	1,460	1,261	423	1,684
1951	3,934	560	792	763	1,555	1,363	456	1,819
1952	4,326	579	828	870	1,698	1,576	473	2,049
1953	4,537	562	966	988	1,954	1,547	474	2,021
1954	4,406	552	951	967	1,918	1,475	461	1,936
1955	4,544	542	1,067	910	1,977	1,528	497	2,025
1956	4,843	574	1,112	1,034	2,146	1,573	550	2,123
1957	5,267	581	1,233	1,211	2,444	1,638	604	2,242
1958	5,564	609	1,403	1,130	2,533	1,746	676	2,422
1959	6,036	654	1,444	1,306	2,750	1,815	817	2,632
1960	6,384	651	1,531	1,370	2,901	1,880	952	2,832
1961	6,630	703	1,567	1,371	2,938	1,952	1,037	2,989
1962	6,788	737	1,568	1,405	2,973	1,978	1,100	3,078
1963 5/	7,175	684	1,748	1,494	3,242	2,039	1,210	3,249
1964 5/	7,100	642	1,735	1,465	3,200	1,990	1,268	3,258

1/ Estimated by Office of Business Economics, U.S. Department of Commerce.

2/ Estimated by multiplying quantities of each of the 3 types of tobacco used in cigarettes consumed domestically by grower prices for tobacco harvested in the previous calendar year.

3/ Difference between farm value and manufacturers' gross receipts from cigarettes, less Federal excise tax; gross receipts calculated by multiplying manufacturers' list prices less 2 percent cash discount by quantity of cigarettes sold for domestic consumption.

4/ Difference between manufacturers' gross receipts and consumer expenditures less State and local taxes.

5/ Preliminary.

Since stemming and redrying leaf tobacco, the first step in preparing it for aging, results in a substantial reduction in bulk and weight, this function is usually performed at plants located in the vicinity of the larger auction markets.

In the past, it was customary to reduce the moisture content of the entire tobacco leaf before aging and stemming, but with the introduction of threshing machines as a means of removing the stem, the industry gradually adopted the practice of stemming before redrying rather than waiting until after the tobacco was aged. "Green stemming" offers several important advantages, including (1) less spoilage, (2) more uniform redrying, and (3) lower storage and handling costs due to reduced weight and bulk.

Little information is available relating to costs of stemming and redrying tobacco. In 1963, charges for contract stemming and redrying average 7.7 cents per pound (stemmed, packed weight), according to the Census of Manfuacturers. Leaf tobacco loses about a third of its weight in this process.

Stemmed and redried tobacco is transferred to warehouses in the vicinity of a manufacturing plant for aging and storage. The aging process may be considered a continuation of the curing process begun on the farm. As a rule, aging requires 2 to 2 1/2 years.

After tobacco is aged, the leaves of different classes, type, and qualities are blended for making cigarettes. Some leaf tobacco is more aromatic, some stronger, and some slower burning. Mixing tobacco of different characteristics results in a uniform product of desired characteristics. Imported Oriental tobacco is usually added to a blend to modify taste and aroma. In the 1950's, reconstituted sheet tobacco was developed and used in making cigarettes. It is composed of fine particles and scraps of tobacco leaves and parts of the stems, which are reconstituted into a sheet. This sheet is blended with leaf tobacco. The blended tobacco is sliced and shredded. Flavoring agents are sprayed over it, and it is treated with humectants to increase its moisture holding qualities. Blending and other steps in preparing tobacco for use in cigarettes is highly mechanized, although not so much, as the manufacture of cigarettes.

Modern machines produce cigarettes in a continuous flow beginning with the shredded tobacco and rolls of cigarette paper and ending with the packed shipping container.

Manufacturing costs.--Maintaining an inventory of aged tobacco is a major manufacturing expense, including depreciation and upkeep of warehouses, transportation and handling costs, and interest on investment in tobacco. Cigarette manufacturers' inventories were valued at $2.6 billion in 1962; tobacco stocks were estimated at 88 percent of the total.

According to data compiled from the Census of Manufacturers, tobacco accounted for about 80 percent of the total value of raw materials, containers, and supplies consumed in manufacturing cigarettes in 1958; cellophane accounted for 5.6 percent and paper and paperboard, excluding foilback and cigarette paper, for 1.9 percent. The remaining 12.5 percent was for other materials.

Extensive automation in cigarette production has kept manufacturing costs down. These costs are estimated at about 1 cent per pack, exclusive of tobacco. 3/ In addition, manufacturers have substantial selling costs.

Costs of cigarette papers, containers, paper and paperboard, fuel, electricity, contract work, and goods for resale made up the largest cost component of the manufacturing bill (table 9). The total cost of these items increased from 77 cents per 1,000 cigarettes in 1947 to 97 cents in 1961 (latest year for which data are available).

3/ Tobacco in the United States, USDA, Agr. Mktg. Serv., Misc. Pub. 867, July 1961.

Table 9.--Components of the manufacturing bill for cigarettes, 1947-61 1/

Year	Paper containers, etc. 2/	Advertising	Production wages	Imported tobacco 3/	Other costs	Net income		Total
						Before taxes	After taxes	
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1947	259	46	42	38	69	127	80	581
1948	280	52	45	38	92	157	98	664
1949	270	62	50	35	96	177	110	690
1950	300	67	51	36	108	195	107	757
1951	308	78	59	40	108	199	88	792
1952	---	---	---	---	---	---	---	---
1953	366	101	71	42	163	223	96	966
1954	339	108	75	43	150	236	113	951
1955	356	123	83	45	173	287	139	1,067
1956	337	144	87	49	197	298	143	1,112
1957	383	162	91	52	238	307	148	1,233
1958	432	191	109	65	194	412	198	1,403
1959	442	202	115	68	188	429	207	1,444
1960	476	201	116	70	228	439	211	1,530
1961	472	204	122	69	224	476	229	1,567

1/ Estimates of components based on data compiled by the Internal Revenue Service and in the Census of Manufactures.
2/ Cigarette paper, containers, parts, supplies, fuel, electricity, contract work, and cost of resales.
3/ Does not include duty on imported tobacco.

Advertising costs made up the fastest growing component of the manufacturing bill. These costs increased to 42 cents per 1,000 cigarettes in 1961 from about 14 cents in 1947, and represented 13 percent of the manufacturing bill compared with 8 percent in 1947. Product differentiation and brand advertising have played an important role in marketing cigarettes. All cigarettes are sold by brand. In general, manufacturers have at least 1 brand in each of the following categories: (1) Regular size, nonfilter; (2) king size, nonfilter; (3) king size, filter tip; and (4) mentholated. Frequently a single brand name is used for 2 or more of the above types.

Wages of production workers constituted 8 percent of the manufacturing bill in 1961. Hourly earnings of these employees increased from an average of $1.12 in 1947 to $2.32 in 1961. Output per man-hour did not rise as much as hourly earnings, so unit labor costs increased. Production wages averaged 25 cents per 1,000 cigarettes in 1961, up from about 13 cents in 1947.

The cost of imported tobacco was a relatively small and decreasing component of the manufacturing bill--7 percent in 1947, 4 percent in 1961.

Other costs, the residual in the manufacturing bill, accounted for 14 percent of the total in 1961. These included transportation charges, depreciation, rents, insurance, interest on borrowed capital, taxes other than excise and income taxes, salaries and wages of non-production workers and other employment costs, and miscellaneous items.

Profits before taxes on income in 1961 were about 4 times those in 1947; profits after taxes were about 3 times the 1947 total. Before-tax profits represented 30 percent of the manufacturing bill in 1961 and after-tax profits made up 15 percent. After-tax profits averaged 47 cents per 1,000 cigarettes in 1961 compared with 24 cents in 1947. Federal income taxes were 51 cents per 1,000 cigarettes in 1961 and 14 cents in 1947.

Industry structure.--Six manufacturing firms produce nearly all of the U.S. cigarette output. Trade analysts have estimated that the largest of these firms produced 33 percent of total output in 1964; the second largest produced 25 percent; the third produced 12 percent; and, the fourth, fifth, and sixth, produced about 10 percent each. 4/

Proportions shifted among firms between 1947 and 1964, but all were substantial producers. The present concentration in cigarette manufacturing does not represent a significant change from the historical pattern.

Cigarette manufacturing is also concentrated geographically. North Carolina produces about 60 percent; Virginia, 21 percent; and Kentucky close to 19 percent of the U.S. output.

Until recently, cigarette producers have restricted most of their output to tobacco products. Diversification has not developed as rapidly as in many industries, probably because of the rapid growth of the cigarette industry. Information disseminated concerning smoking and health in the past few years may have encouraged diversification.

The Wholesaling-Retailing Bill

The wholesaling-retailing bill includes costs and profits involved in wholesaling and retailing cigarettes. It is the difference between the manufacturers' gross receipts including Federal excise taxes and consumer expenditures less State and local cigarette taxes.

This bill has increased more slowly than the manufacturing bill. In 1964, it represented about 21 percent of consumer expenditures for cigarettes and 46 percent of the cigarette marketing bill (table 8). The wholesaling-retailing bill per 1,000

4/ Printer's Ink, Dec. 1964.

cigarettes was $2.95 in 1964 compared with $1.74 in 1947.

Manufacturers sell a large proportion of their cigarettes to tobacco wholesalers and jobbers. With the increase in cigarette sales by grocery chains, the proportion of cigarettes going directly from the factory to the retail warehouse probably has increased.

Tobacco wholesalers purchase large quantities of the various brands from manufacturers and resell smaller quantities to retailers in their areas. Wholesalers' costs are for procurement, transportation, storage, and sales.

Many types of retail outlets handle cigarettes. Grocery stores accounted for about 34 percent of retail sales of cigarettes in 1963. 5/ Other important outlets are vending machines, drug stores, cigar stores, restaurants, bars, and liquor stores. Smaller quantities go to military installations, department and variety stores, mail order houses, hotels and motels, amusement parks, and service stations.

Retailers' charges include costs of buying, storage, display, and selling. The recent trend toward more brands has tended to increase both retailing and wholesaling costs since more items must be stocked at one time.

The Cigarette Tax Bill

Revenues from cigarette taxes totaled $3.3 billion in 1964 compared with about $1.5 billion in 1947. Federal taxes increased from $1.2 billion to $2.0 billion between these 2 years and State and local taxes rose from $0.3 billion in 1947 to $1.3 billion in 1964.

Excise and use taxes levied on cigarettes have represented a major consumer cost for many years. In 1947, Federal taxes were 7 cents per pack and State and local taxes averaged about 1.4 cents, for a total of 8.4 cents per pack. Since 1947, the Federal levy has increased to 8 cents. Rates of State and local agencies were increased frequently and in 1964 averaged 5.1 cents.

Cigarette tax bills were introduced in the legislature of 16 States in the first 6 months of 1964 and 7 of them were passed. As a result, 6 States increased their tax rates 2 to 3 cents a pack, and 1 voted to continue the existing rate. As of January 1, 1965, 15 States had an 8-cent tax, the same as the Federal rate, and 1 had a 9-cent tax. Only North Carolina and Oregon did not tax cigarettes.

Smaller political units also tax cigarettes. New York City raised its tax on cigarettes from 2 to 4 cents per pack, and St. Louis from 3 to 5 cents in 1963. A 2-cent tax was levied in Los Angeles for the first time, in 1965.

Returns to Tobacco Growers

The domestic tobacco used in making cigarettes consumed in this country had a farm value of $642 million in 1964--up 50 percent from 1947. This value was calculated by multiplying the quantity of leaf tobacco (farm sales-weight) equivalent to cigarettes consumed in each year by the prices received by farmers for the crop harvested in the previous year. Since tobacco is aged 2 to 2 1/2 years before it is used in cigarettes, these prices probably differed from those paid for tobacco used in those years. These prices, however, were those paid for replacement stocks. Use of previous-year prices in calculating the farm value accords with the last-in-first-out accounting method of valuation.

Flue-cured tobacco accounted for about 61 percent of the farm value in 1964, burley for 38 percent, and Maryland tobacco for a little more than 1 percent. Prices received by farmers for these 3 types of tobacco have been higher in recent years than in the early postwar years. They averaged 58.3 cents per pound for the

5/ Food Field Reporter, Aug. 17, 1964.

1963-64 crop year and 45.0 cents for the 1946-47 crop year.

More leaf tobacco is required for king-size nonfilters than for regular size nonfilters because of the additional length. When a filter replaces part of the length of a cigarette correspondingly less leaf tobacco is needed. Because of differences in tobacco content, the farmer's share of the retail price is largest for king size nonfilter cigarettes and smallest for regular size filter tips.

The increase in the aggregate farm value was slowed during this period by a decrease in the average quantity of leaf tobacco used per 1,000 cigarettes (table 8). Had the leaf tobacco equivalent remained unchanged from the 1947-49 average, an additional 333 million pounds of leaf would have been used in 1963, having a value of $198 million. The reduction in the leaf-equivalent used probably slowed the rise in retail prices.

South Atlantic and South Central States produce most of the cigarette tobacco. North Carolina and Kentucky together grow two-thirds of it. Flue-cured tobacco is auctioned from July through December, burley from November through February, and Maryland tobacco from April through July. An estimated 400 hours of labor are now required to grow an acre of tobacco. This compares with 8 hours to produce an acre of wheat. In addition, approximately 100 hours are required to cure the tobacco produced on an acre and transport it to an auction warehouse.

Tobacco warehousemen provide the selling services required in transferring cured tobacco from growers to tobacco buyers, most of whom are manufacturers. Under the Tobacco Inspection Act of 1935, the Federal Government provides mandatory inspection and grading at markets designated by the Secretary of Agriculture. The Government also provides market news service.

Farmers are paid the same day the tobacco is sold, less the selling and warehouse charges. Charges for handling and auctioning tobacco differ substantially among markets. In the 1963-64 season, handling charges varied from 10 to 25 cents per 100 pounds of tobacco or less, auctioning fees from 15 cents to $1.00 and commission charges ranged from 2 1/2 to 4 percent of gross sales. These charges were not deducted from the prices used in calculating the farm value, so they make up a small part of the farm value.